

### Abstract

An object of the present invention is to provide a method for effectively producing, within a short period of time, a radical polymer having controlled molecular weight distribution or a narrow molecular weight distribution profile, the method including polymerizing a radical-polymerizable monomer. Another object of the invention is to provide a microreactor which can be readily fabricated.

The invention attains the objects through provision of a method for producing a radical polymer, which method includes feeding a radical polymerization initiator and a radical-polymerizable monomer into a reaction tube having an inner diameter of 2 mm or less and performing polymerization in the reaction tube in a homogeneous liquid state under flow conditions, and a microreactor having a jacket for allowing a temperature-regulating fluid to pass therethrough and a plurality of round tubes which are arranged in parallel in the jacket, each having an inner diameter of 2 mm or less, wherein reaction temperature in the round tubes can be regulated through flowing of the temperature-regulating fluid in the jacket.